



Anticipating the unintended consequences of transport technologies

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Plan

- Transport and its related challenges
- Transport and *Happy Cities*
- Impacts of (some) transport technology solutions
- Visioning the future

Ministry of Transport Outcomes

Inclusive access

Enabling all people to participate in society through access to social and economic opportunities, such as work, education, and healthcare.

Economic prosperity

Supporting economic activity via local, regional, and international connections, with efficient movements of people and products.

Healthy and safe people

Protecting people from transport-related injuries and harmful pollution, and making active travel an attractive option.

Environmental sustainability

Transitioning to net zero carbon emissions, and maintaining or improving biodiversity, water quality, and air quality.

Resilience and security

Minimising and managing the risks from natural and human-made hazards, anticipating and adapting to emerging threats, and recovering effectively from disruptive events.

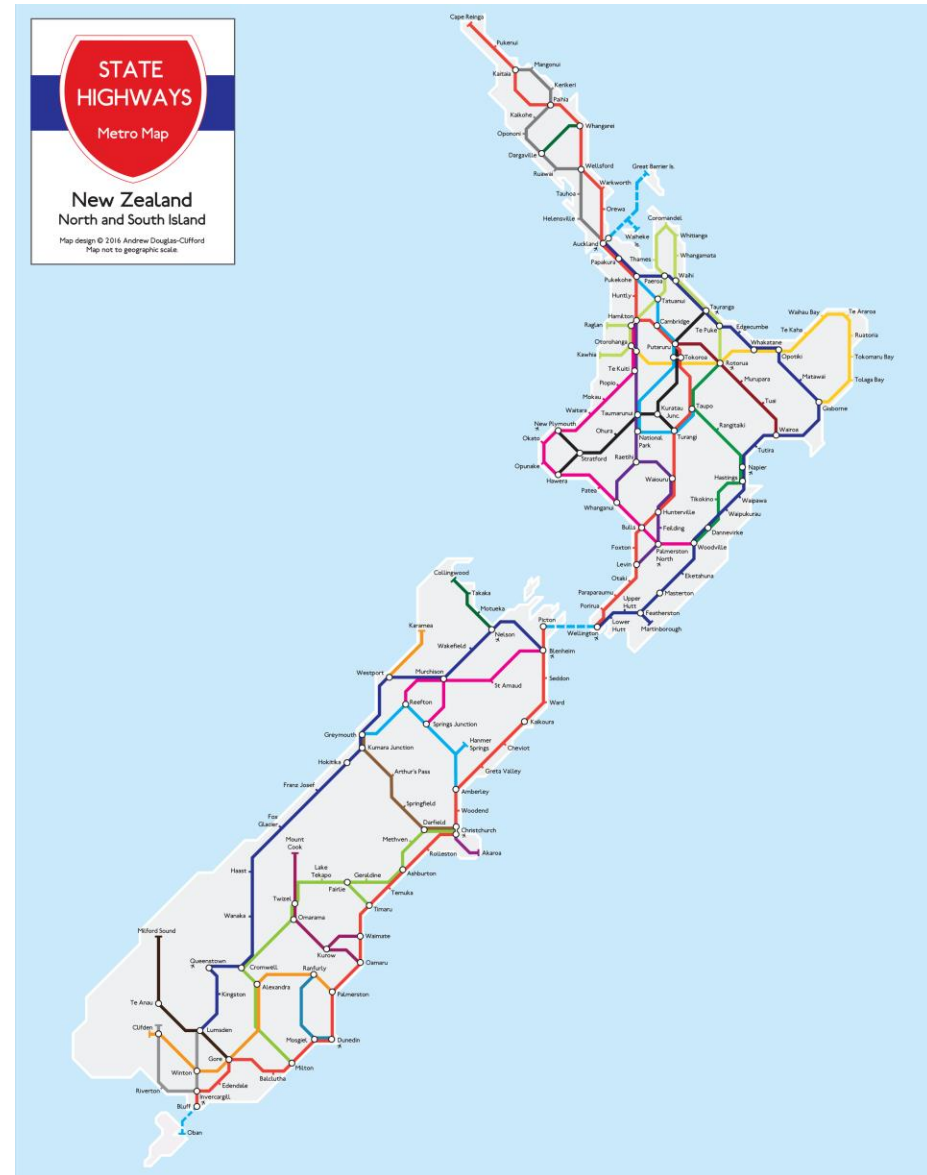
A transport system that improves wellbeing and liveability

Transport

Movement of people and things

Access to

- Employment
- Recreation
- Social support
- Health services
- Raw materials
- Products
- Markets

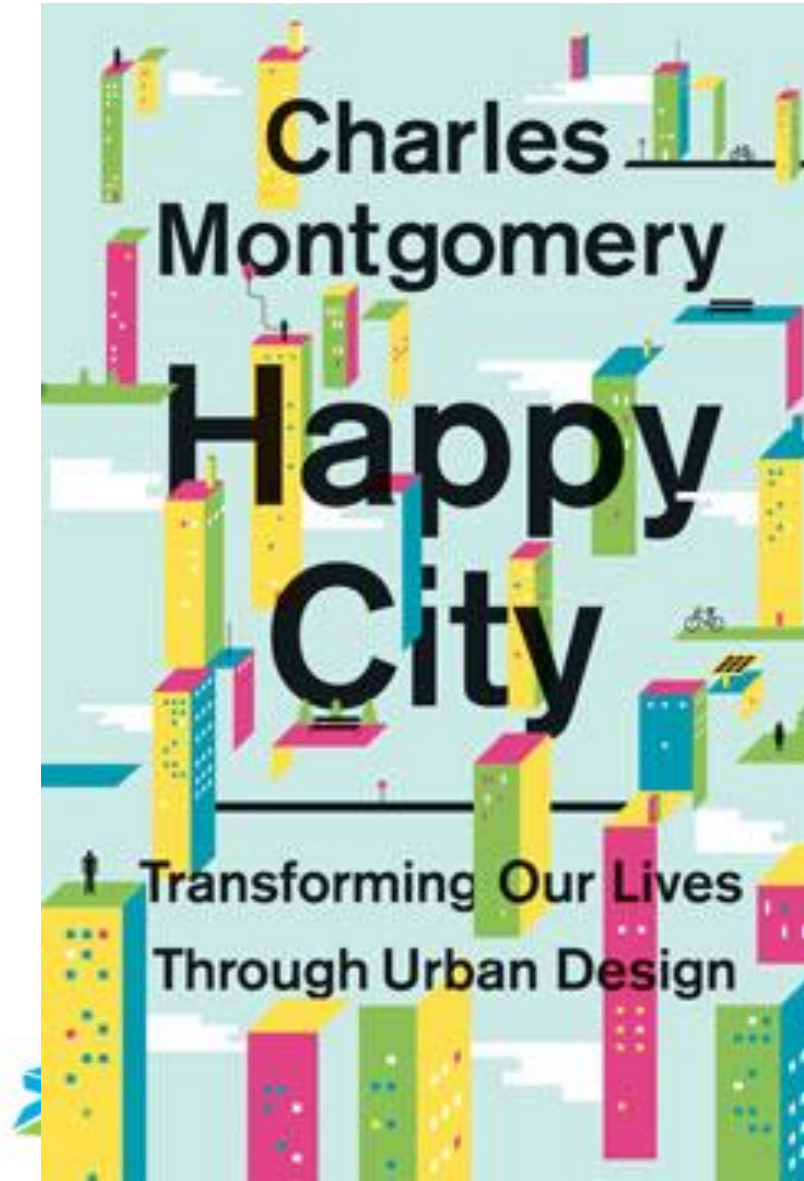


Transport related challenges

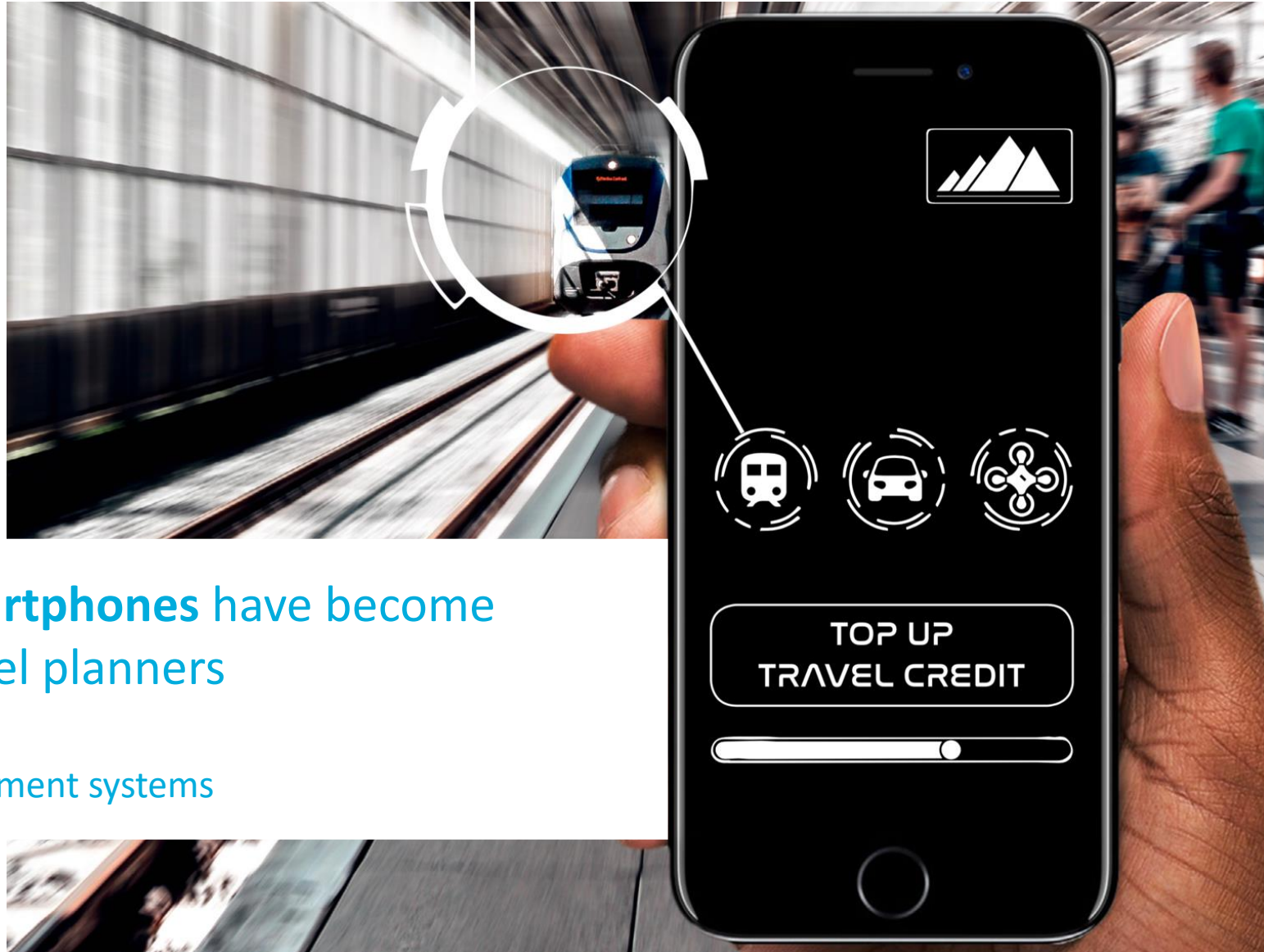
- Safety
- Climate change
- Congestion
- Sprawl
- Health/wellbeing – obesity and mental health
- Community
- Social equity

Transport features of Happy Cities

- Walkable
- Low/slow traffic
- Good public transport
- Close proximity to facilities e.g. schools, shops, job
- *Bumping and gathering* spaces/places









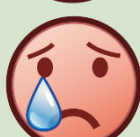
Smartphones



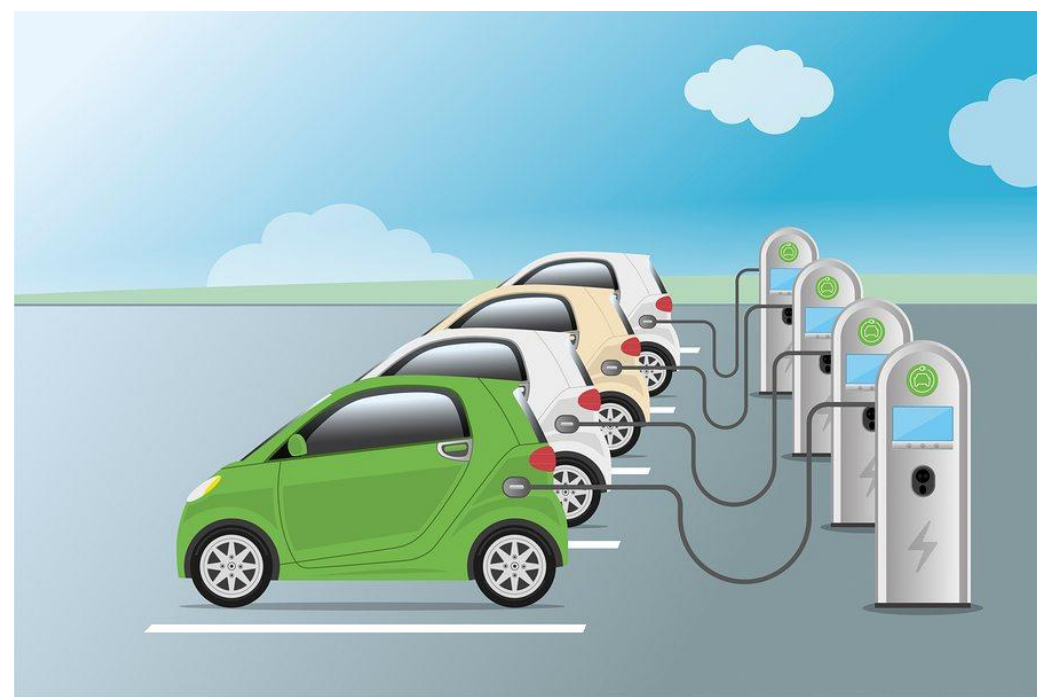
Smartphones have become
travel planners

+ payment systems

Smartphones








Challenge	Impact
Safety	
Climate change	
Congestion	
Sprawl	
Obesity & mental health	
Community	
Social equity	 Smartphone use lower in low SE groups

Electric Vehicles

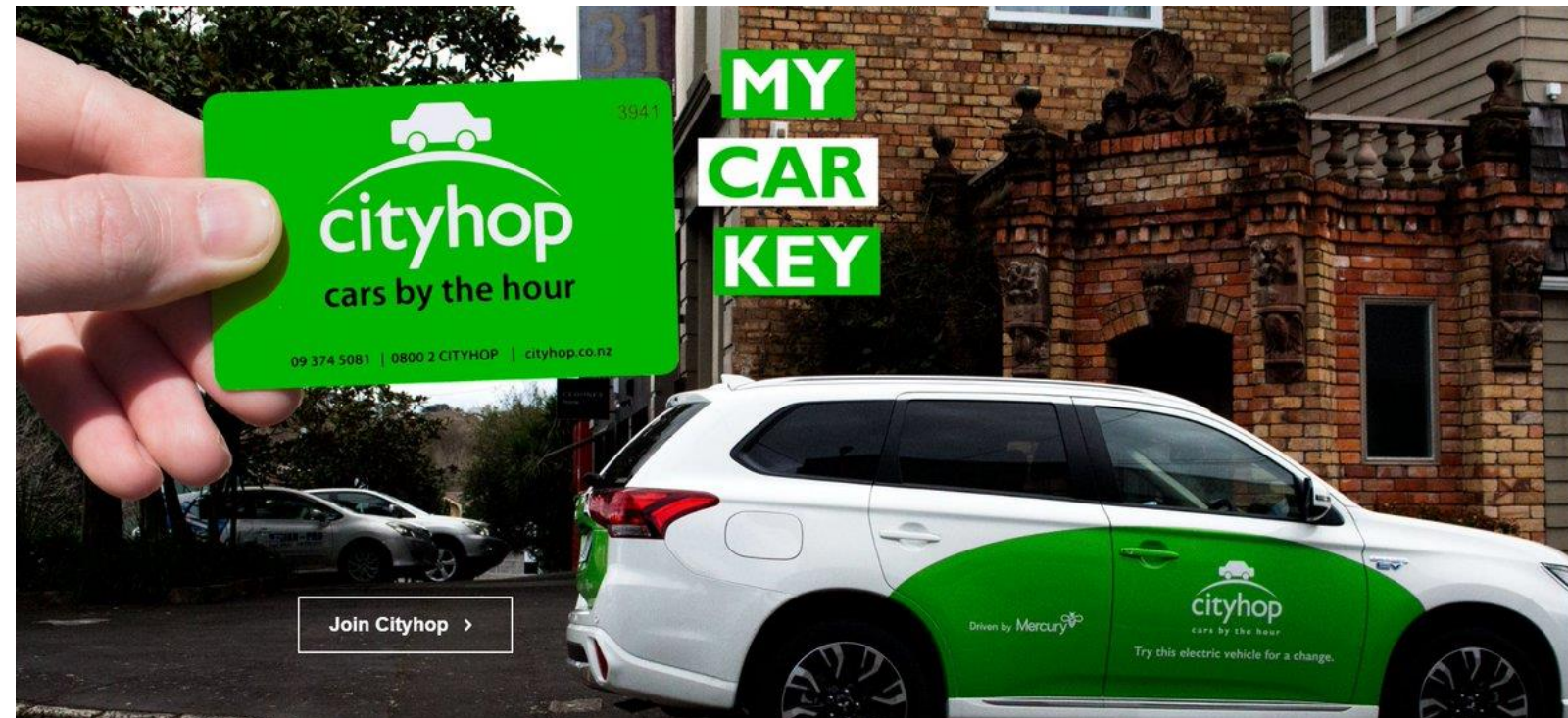


Ministry of **Transport**
TE MANATŪ WAKA







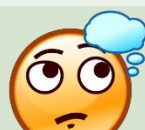
Electric Vehicles

Challenge	Impact	
Safety		
Climate change		Low/zero emissions
Congestion		Cheaper fuel means more travel
Sprawl		Cheaper fuel means more travel
Obesity & mental health		Cheaper fuel means more travel
Community		Quiet
Social equity		Newer cars more expensive

Mobility as a service









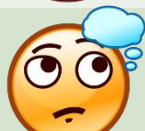
Mobility as a service

Challenge	Impact	
Safety		More use -> newer fleet
Climate change		More use -> newer fleet
Congestion		Individual journey decision -> less SOV
Sprawl		Individual journey decision -> less SOV
Obesity & mental health		Reduction in active travel?
Community		Reduction in active travel?
Social equity		Variations in service quality for lower SES?

Autonomous vehicles



Autonomous vehicles

Challenge	Impact	
Safety		Reduced human error
Climate change		More use -> newer fleet
Congestion		Efficient driving but more travel?
Sprawl		Travel time no longer negative
Obesity & mental health		Door to door
Community		Door to door
Social equity		Variations in service quality for lower SES?








Active travel



Living Streets Aotearoa



Active travel

Challenge	Impact
Safety	
Climate change	
Congestion	
Sprawl	
Obesity & mental health	
Community	
Social equity	

A technology-driven future?

... technology dictates the future





Or
A technology-enhanced future?
... a vision uses technology

Freiburg, Germany

Freiburg, Germany



Freiburg, Germany



Vathorst, Netherlands





Groot Wezenland



Final thoughts



- Fast is not always best
 - *“It can take a long time to get to the shops unlike the places with fences and garages”*
- Door to door may not always be best
 - Exercise and interaction are good
- Need a vision for how we want our cities/communities to be
- Technology as our servant not our master





If you plan cities for cars & traffic, you get cars & traffic. If you plan for people & places, you get people & places - Fred Kent

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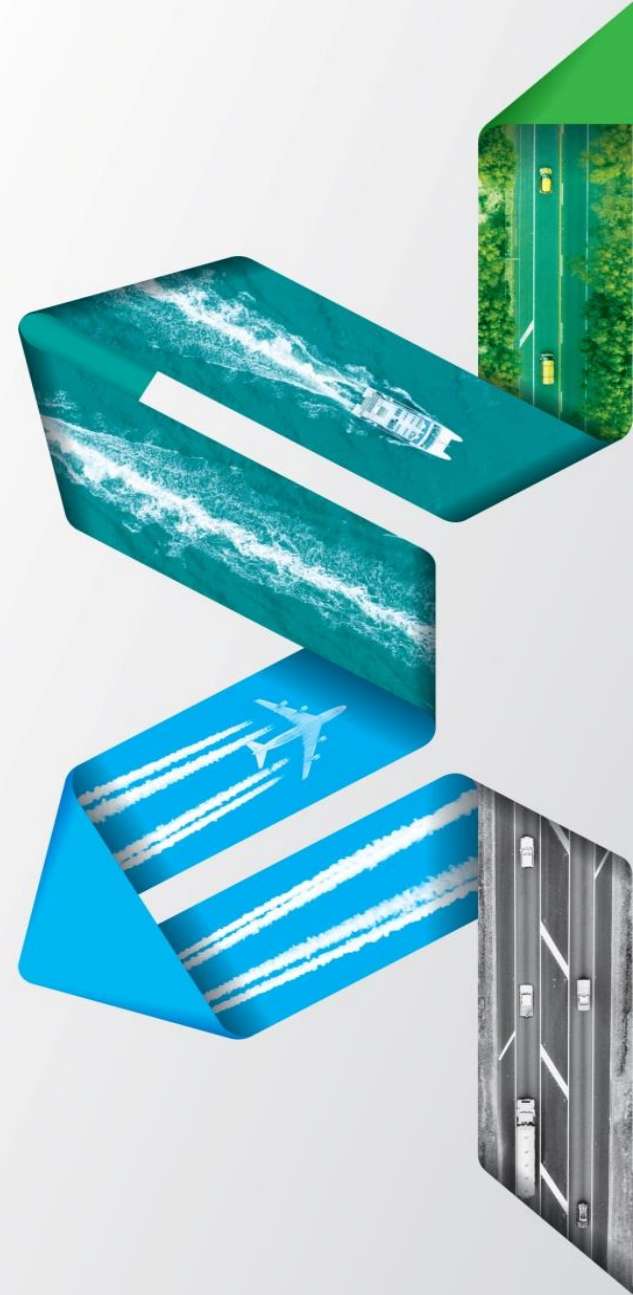
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Thank you



Wellbeing and intelligent transport decisions

*The idea that the main benefit of improvements to transport infrastructure is the saving of travel time has been central to transport economic analysis. There is, however, **little empirical evidence to support this** proposition. Indeed, in the long run average travel time is conserved, implying that **travellers take the benefit of improvements in the form of additional access to more distant destinations made possible by higher speeds.***

Metz D, 2008, The myth of travel time saving. Transport Reviews, 28, 3, 321–336.

www.greaterauckland.org.nz/wp-content/uploads/2009/10/Metz-2008.pdf